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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/567,367

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George J. Baley

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SUITE 340

RESTON, VA 20190

EXAMINER

PAK, JOHN D

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/567,367	Applicant(s) BALEY ET AL.	
	Examiner JOHN PAK	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-20, 41, 46-49 and 54-57 is/are pending in the application.
- 5a) Of the above claim(s) 12, 13, 17 and 20 is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-11, 14-16, 18-19, 41, 46-49 and 54-57 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Claims 1-20, 41, 46-49 and 54-57 are pending in this application.

Applicant's election without traverse of the invention of Group I, claims 1-12 (in part), 13, 15 (in part), 16, 18-19 (in part), 41 (in part), 46-49 (in part) and 54-57 (in part), wherein the single disclosed species of the herbicide is glyphosate and the single disclosed species of the pathogen is Puccinia, in the response filed on 6/8/2011 is acknowledged. It is noted that inclusion of claim 13 and exclusion of claim 14 for Group I invention (wheat crop) in the restriction requirement of 5/3/2011 was an inadvertent error.

Consequently, claims 12-13, 17 and 20 are withdrawn from further consideration as being directed to non-elected subject matter, and claims 1-11, 14-16, 18-19, 41, 46-49 and 54-57 will presently be examined to the extent that they read on the elected subject matter of record (method for controlling a Puccinia fungal disease on glyphosate-resistant wheat).

Applicant is advised to delete an extra comma at line 1 of claim 11.

The following is a quotation of the fourth paragraph of 35 U.S.C. 112:

Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

Claims 9 and 57 are rejected under 35 U.S.C. 112, fourth paragraph, for failing to further limit the subject matter of a previous claim. Claim 9 is dependent on claim 1 but the fungal pathogen feature of claim 9 is already recited in claim 1. Similarly, claim 57 is dependent on claim 54, but the soy rust or stripe rust feature of claim 57 is already

recited in claim 54. Claims 9 and 57 therefore fail to specify a further limitation of the subject matter set forth in their respective base claims.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 46-49 and 54-57 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for treating fungal disease or reversing adverse effects of fungal disease, does not reasonably provide enablement for **preventing** fungal disease. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

A definition of "prevent" is "make impossible by prior action." See the cited Webster's New World Dictionary. It is this scope that is being rejected here. A fungal disease can be controlled, but one skilled in the art would not accept that it could be made impossible by prior action because that would require a sterile environment. The entire scope of "preventing a fungal disease" does not find adequate enabling support from the originally filed disclosure.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 14-16, 18-19, 41, 46-49 and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andrews et al. (US 2003/0077801) in view of Chen et al. (US 7,268,274), Schaub et al. (US 4,609,668) and CABA abstract 1994:82029.

Andrews et al. teach the application of glyphosate + fungicide in treating herbicide-resistant crops such as glyphosate-resistant wheat (see claims 41-43; paragraphs 4, 7, 38).

Chen et al. disclose glyphosate-tolerant wheat (claim 2), wherein glyphosate can be applied from about 8 oz/acre to 64 oz/acre or more (column 5, lines 13-40). This is equivalent to from about 0.5 kg/hectare to 4.48 kg/hectare or more.

Schaub et al. disclose fungicidal triazoles that can be applied to wheat to control *Puccinia striiformis* (stripe rust). See Example 8 on column 11; Column 5, lines 28-50.

CABA abstract 1994:82029 discloses stripe rust as a serious disease of wheat. Stripe rust is caused by *Puccinia striiformis*. Up to 84% of yield can be lost due to stripe rust. Seedlings are more susceptible than adult plants. Yield loss decreased at higher temperatures.

While the cited prior art references do not explicitly disclose glyphosate as reducing the adverse effects of *Puccinia* (e.g. disease) on glyphosate-resistant wheat, it would have been quite obvious for the ordinary skilled artisan to apply glyphosate to fields where glyphosate-resistant wheat is growing. That's the whole point of developing glyphosate-resistant wheat. Any additional effect such as *Puccinia* control

would have been the result of performing a known prior art process step with a known prior art agent (glyphosate) on a known substrate (glyphosate-resistant wheat).

It is well established that “[m]ere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention.” In re Baxter Travenol Labs, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991). In Baxter, the court held that even when the prior art did not expressly disclose hemolysis-suppression feature or property of a blood bag plasticizer, such unrecognized feature or property is insufficient for rebutting a prima facie case of obviousness over a prior art blood bag that utilized the same plasticizer. Id. See also Ex parte Obiaya, 227 USPQ 58, 60 (Bd. Pat. App. & Int. 1985) (“The fact that appellant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious”).

Further, the claims are quite broadly written and they are open to the use of a fungicidal agent, which has been taught in the art to control foliar Puccinia diseases such as stripe rust. Because stripe rust can cause severe economic damage to wheat yield, one having ordinary skill in the art would have been motivated to utilize a fungicidal agent such as those taught by Schaub et al. to control stripe rust on glyphosate-resistant wheat such as those taught by Andrews et al. and Chen et al. In fact, Andrews et al. teach the combined use of a fungicide with glyphosate on glyphosate-resistant wheat.

Features such as at least 2 separate applications of glyphosate, and at least 7 days apart, are application features that would have been within the skill of the ordinary skilled artisan, who would evaluate the field and environmental conditions of the substrate wheat to optimize the benefit of additional glyphosate application and its timing.

The various glyphosate application amounts claimed, such as 1-2 kg/hectare or at least 1 kg/ha, are noted, but those amounts are within the known prior art glyphosate application amounts for glyphosate-resistant wheat (Chen et al.). One of ordinary skill in the art would have found it obvious to adjust the application amount of glyphosate depending on the myriad field and environmental factors that determine application amounts within the known range taught by the prior art.

The fact that the yield would be higher after applying just glyphosate alone would have been obvious because application of glyphosate to glyphosate-resistant wheat would control competitive weeds to result in higher yield. A specific yield improvement such as the claimed 5-20% would depend on various factors such as weed infestation, wherein heavy weed infestation would result in higher yield improvement after applying glyphosate to glyphosate-resistant wheat. Improvement in yield would also have been expected from the application of a fungicide (Schaub et al.) that controls the yield-lowering effect of stripe rust on wheat.

Treating the glyphosate-resistant wheat prior to the display of symptoms of pathogen presence would have been obvious to the ordinary skilled artisan in this field,

because fungal infections are not visible at its early stages and early control of pathogens reduces the likelihood of the pathogens spreading throughout the glyphosate-resistant wheat field.

Treatment between the 3 leaf stage and the flowering stage is treatment during the earlier growth stages of the glyphosate-resistant wheat. CABA 1994:82029 teaches that seedlings are more susceptible than adult plants to stripe rust. The ordinary skilled artisan would have been motivated to control Puccinia diseases at the 3 leaf stage to the flowering stage in order to control the diseases during the more susceptible stages of growth and also to inhibit the spread of disease throughout the glyphosate-resistant wheat field.

The feature, "under conditions sufficient to inhibit growth or proliferation of fungal pathogens" is noted, but such feature would have been obvious to the ordinary skilled artisan. The ordinary skilled artisan would have knowledge of known environmental conditions (e.g. temperature and humidity or dampness) that inhibit or promote growth or proliferation of fungi such as species of Puccinia, and he/she would have been motivated to provide treatment at a time when the treatment had a good likelihood of success, such as "under conditions sufficient to inhibit growth or proliferation of fungal pathogens."

Remaining claimed features such as harvesting glyphosate-resistant wheat after it has been treated with glyphosate and the glyphosate being in a herbicide composition are manifestly obvious. Harvesting valuable crop such as wheat is obvious enough to

go without saying, and glyphosate is a herbicide so it is necessarily present in a herbicidal composition.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Johann Richter, can be reached on **(571)272-0646**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Pak/
Primary Examiner, Art Unit 1616